

Amendments to the Claims

1. (Currently Amended) A method of managing memory in a distributed network ~~having a client application program and a host channel adapter~~, the method comprising:
registering a buffer of memory in response to receipt of an input/output request from a client application related to the host channel adapter;
allowing the client application program access to the registered buffer to perform a request; and
subsequent to performance of the request and in the absence of instruction from the client application program, maintaining the buffer as registered to allow the client application program to perform ~~another~~ one or more subsequent requests using the registered buffer.
2. (Original) A method as defined in claim 1 wherein the distributed network is a system area network.
3. (Original) A method as defined in claim 1 wherein the act of maintaining the buffer as registered comprises maintaining a list of registered buffers.
4. (Original) A method as defined in claim 3 wherein the list is a lookup table.
5. (Currently Amended) A method as defined in claim 1 further comprising:
receiving a request from the client application program to free the buffer; and
de-registering the buffer so that the buffer is available for registration to other client application programs ~~cannot use the buffer to perform a request~~.
6. (Canceled)
7. (Original) A method as defined in claim 5 wherein the act of de-registering the buffer is performed by the operating system.
8. (Original) A method as defined in claim 5 wherein the act of de-registering the buffer is not performed by the application program.
9. (Currently Amended) A method as defined in claim 1 further comprising:
in response to determining that the client application program has not used the registered buffer within a predetermined time period beginning at the performance of the registering act, evaluating whether the buffer should be de-registered; and
if the buffer should be de-registered, de-registering the buffer.

10. (Original) A method as defined in claim 9 wherein the act of evaluating whether the buffer should de-registered is performed by operating system using garbage collection techniques.

11-20. (Canceled)

21. (New) A method as defined in claim 1, further comprising:
receiving a request from the client application program to modify properties of the registered buffer to conform to a specified set of properties; and
de-registering the buffer and registering a new buffer that conforms to the specified set of properties.

22. (New) A method as defined in claim 1, further comprising:
receiving a request from the client application program to modify properties of the registered buffer to conform to a specified set of properties; and
modifying the properties of the registered buffer to conform to the specified set of properties.

23. (New) A computer program product readable by a computer and encoding instructions for performing a method for managing memory in a distributed network, the method comprising:

registering a buffer of memory in response to receipt of an input/output request from a client application;

allowing the client application program access to the registered buffer to perform a request; and

subsequent to performance of the request and in the absence of instruction from the client application program, maintaining the buffer as registered to allow the client application program to perform one or more subsequent requests using the registered buffer.

24. (New) A computer program product as defined in claim 23, wherein the method further comprises:

in response to determining that the client application program has not used the registered buffer within a predetermined time period beginning at the performance of the registering act, evaluating whether the buffer should be de-registered; and

if the buffer should be de-registered, de-registering the buffer.

25. (New) A computer program product as defined in claim 23, wherein the method further comprises:

receiving a request from the client application program to free the buffer; and
de-registering the buffer so that the buffer is available for registration to other client application programs.

26. (New) A computer program product as defined in claim 23, wherein the act of maintaining the buffer as registered comprises maintaining a list of registered buffers, the method further comprising:

in response to receipt of an input/output request from another client application program, accessing the list of registered buffers to select therefrom an unregistered buffer for registration to the other client application program.

27. (New) A computer program product readable by a computer and encoding instructions for performing a method for managing memory in a distributed network, the method comprising:

receiving an input/output request from a first client application program, wherein the request specifies a specific buffer of information for use in performing the request;
determining whether the specific buffer is registered to another client application program;

if the specific buffer is not registered to another client application program, registering the specific buffer to the first client application program for use in performing the request; and
subsequent to performance of the request and in the absence of instruction from the first client application program, maintaining the buffer as registered to the first client application program to allow the first client application program to use the registered buffer to perform one or more subsequent requests.

28. (New) A computer program product as defined in claim 27, wherein the method further comprises:

receiving a request from the first client application program to free the buffer; and
de-registering the buffer so that the buffer is available for registration to other client application programs.

29. (New) A computer program product as defined in claim 27, wherein the method further comprises:

maintaining a status list identifying each of a plurality of buffers as registered or unregistered, and wherein the determining act comprises:

accessing the status list to determine whether the specific buffer is available for registration.

30. (New) A computer program product as defined in claim 29, wherein the method further comprises:

if the specific buffer is registered to another client application program, selecting another buffer in the status list; and

in response to selecting of another buffer in the status list, identified as unregistered, and performing the registering and the maintaining acts relative to the selected buffer.

31. (New) A computer program product as defined in claim 27, wherein the method further comprises:

receiving a request from the first client application program to modify properties of the registered buffer to conform to a specified set of properties; and

de-registering the buffer and registering a new buffer that conforms to the specified set of properties.